

Using information decomposition spectra to explore the function of feedback

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Much feedback from higher to lower regions of neocortex is to the apical tufts of pyramidal cells. Multisite patch-clamping provides evidence that in some cases apical input is used to modulate response to basal input, whereas in others the cell operates as a single compact electrotonic integrator. I will outline ways in which the distinction between these two modes of function can be clarified using recent advances in information theory that distinguish different components of output information depending on their relations to two distinct classes of input.